

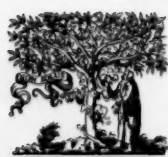
COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY

An International Journal

EDITORS: P. W. HOCHACHKA and T. P. MOMMSEN

Volume Contents

Volume 118, Part C, 1997



ELSEVIER

COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY

EDITORS

Dr P. W. Hochachka & Dr T. P. Mommsen

CBP Editorial Office, University of British Columbia, 6371 Crescent Road, Vancouver BC, Canada V6T 1Z2. Tel.: 604 228-0402; Fax: 604 228-0408

Managing Editor: Leslie Lightheart (Tel.: 604 228-0402; Fax: 604 228-0408).

ASSOCIATE EDITORS

Dr Manfred Grieshaber, Institut für Tierphysiologie, Heinrich-Heine-Universität, Universitätsstr. 1, D-40225 Düsseldorf, Germany

Dr Jeffrey R. Hazel, Department of Zoology, Arizona State University, Tempe, AZ 85287, U.S.A.

Dr Hajime Ishikawa, Zoological Institute, Faculty of Science, University of Tokyo Hongo Bunkyo-ku, Tokyo 113, Japan

Dr Kiyooki Kuwasawa, Department of Biology, Tokyo Metropolitan University, Hachioji, Tokyo 192-03, Japan

Dr D. R. Livingstone, N.E.R.C. Plymouth Marine Laboratory, Citadel Hill, Plymouth PL1 2PB, U.K.

Dr Charlotte P. Mangum, Department of Biology, The College of William & Mary, P.O. Box 8795, Williamsburg, VA 23187-8795, U.S.A.

Dr Mikko J. Nikinmaa, Department of Zoology, Division of Physiology, University of Helsinki, P.O. Box 17, FIN-00014 Helsinki, Finland

Prof. Michael C. Thorndyke, School of Biological Sciences, Royal Holloway College, University of London, Egham, Surrey TW20 0EX, U.K.

Dr Akihisa Urano, Division of Biological Sciences, Graduate School of Science, Hokkaido University, Sapporo, Hokkaido 060, Japan

CBP EDITORIAL BOARD MEMBERS

Dr V. M. F. de Almeida e Val
Manaus, Brazil

Dr J. Baldwin
Clayton, Australia

Dr R. V. Baudinette
Bedford Park, Australia

Dr S. Bhattacharya
Santiniketan, India

Dr J. H. Brackenbury
Cambridge, U.K.

Dr P. J. Butler
Birmingham, U.K.

Dr A. R. Cossins
Liverpool, U.K.

Dr P. S. Davie
Palmerston North, New Zealand

Dr F. De Pablo
Madrid, Spain

Dr W. R. Ellington
Tallahassee, U.S.A.

Dr E. Fabbri
Ferrara, Italy

Dr G. Flik
Nijmegen, The Netherlands

Prof. L. Förlin
Göteborg, Sweden

Prof. R. Fujii
Chiba, Japan

Prof. G. Gäde
Rondebosch, South Africa

Prof. N. G. Heisler
Göttingen, Germany

Dr R. B. Huey
Seattle, U.S.A.

Prof. M. Kobayashi
Hiroshima, Japan

Dr M. Krauskopf
Valdivia, Chile

Dr D. T. Manahan
Los Angeles, U.S.A.

Dr A. Meyer
Stony Brook, U.S.A.

Dr S. Morris
Sydney, Australia

Prof. T. Motokawa
Tokyo, Japan

Dr S. K. Pierce, Jr
College Park, U.S.A.

Dr J. C. Rankin
Odense, Denmark

Dr L. M. Riddiford
Seattle, U.S.A.

Dr K. L. Shephard
Buckingham, U.K.

Dr J. F. Siebenaller
Baton Rouge, U.S.A.

Dr J. J. Stegeman
Woods Hole, U.S.A.

Prof. F. Tokunaga
Osaka, Japan

Dr J.-P. Truchot
Arcachon, France

Prof. A. Viarengo
Genoa, Italy

Dr C. M. Wood
Hamilton, Canada

Dr P. A. Wright
Guelph, Canada

Prof. T. Yamaguchi
Okayama, Japan

Prof. T. Yoshizawa
Osaka, Japan

Periodicals Postage Paid at New York, NY and additional offices. Postmaster send address corrections to Comparative Biochemistry and Physiology Part C, c/o Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010-5107, USA.

Copyright © 1997 Elsevier Science Inc.



European Society for
Comparative Physiology & Biochemistry



Japanese Society for
Comparative Physiology & Biochemistry



The Society for
Integrative and Comparative Biology
(formerly The American Society of Zoologists)



Canadian Society for Zoology
Comparative Physiology & Biochemistry Section

SEB

THE SOCIETY FOR EXPERIMENTAL BIOLOGY



Australian & New Zealand Society for
Comparative Physiology & Biochemistry





CONTENTS OF VOLUME 118

Vol. 118C, No. 1

- | | |
|---|---|
| G. S. G. Spencer | 1 Basal secretion of growth hormone in sheep is not influenced by GH feedback |
| M. Perusquía, R. Hernández,
L. M. Montaña, C. M. Villalón and
M. G. Campos | 5 Inhibitory effect of sex steroids on guinea-pig airway smooth muscle contractions |
| P. K. Krishnakumar, E. Casillas and
U. Varanasi | 11 Cytochemical responses in the digestive tissue of <i>Mytilus edulis</i> complex exposed to microencapsulated PAHs or PCBs |
| R. A. Webb | 19 Glutamatergic inositol 1,4,5-trisphosphate production in tissue slices of the cestode <i>Hymenolepis diminuta</i> |
| K. Yamauchi and J. R. Tata | 27 Tissue-dependent and developmentally regulated cytosolic thyroid-hormone-binding proteins (CTBPs) in <i>Xenopus</i> |
| M. Roméo and M. Gnassia-Barelli | 33 Effect of heavy metals on lipid peroxidation in the Mediterranean clam <i>Ruditapes decussatus</i> |
| G. P. Richards, Y.-M. Liang, J. Chao and
L. Chao | 39 Purification, characterization and activation of fish muscle prokallikrein |
| G. P. Richards, L. Chao and J. Chao | 49 Distribution of tissue kallikreins in lower vertebrates: Potential physiological roles for fish kallikreins |
| J. D. Hardege, J. Duncan and J. L. Ram | 59 Tricyclic antidepressants suppress spawning and fertilization in the zebra mussel, <i>Dreissena polymorpha</i> |
| E. S.-M. Po and J. W. Ho | 65 Paraquat affects light-induced proton transport through chloroplast membranes in spinach |
| M. A. Vives, M. Macián, J. Seguer,
M. R. Infante and M. P. Vinardell | 71 Hemolytic action of anionic surfactants of the diacyl lysine type |
| A. K. Singh and Y. Jiang | 75 Developmental effects of chronic low-level lead exposure on voltage-gated calcium channels in brain synaptosomes obtained from the neonatal and the adult rats |
| P. Kovács, L. Kőhidai and G. Csaba | 83 Effect of 3-amino-1-propanol on the phosphatidylinositol (PI) and glycosyl phosphatidylinositol (GPI) systems of <i>Tetrahymena</i> |
| P. Prakash, P. G. Kumar, M. Laloraya,
T. Javeri and M. S. Parihar | 89 Superoxide anion radical production as a cadmium-mediated mechanism of toxicity in avian thyroid: An electron spin resonance study by spin trapping |
| G. Theophilidis, M. Benaki and
E. Papadopoulou-Mourkidou | 97 Neurotoxic action of six pyrethroid insecticides on the isolated sciatic nerve of a frog (<i>Rana ridibunda</i>) |
| L. J. Núñez-Vergara, J. A. Squella,
S. Bollo-Dragnic, A. Morello, Y. Repetto,
J. Aldunate and M. E. Letelier | 105 Nitro aryl 1,4-dihydropyridine derivatives: Effects on <i>Trypanosoma cruzi</i> |
| | I Comparative Biochemistry and Physiology C Bibliography |

Vol. 118C, No. 2

- | | |
|---|---|
| C. E. Lundholm | 113 DDE-induced eggshell thinning in birds: effects of p,p'-DDE on the calcium and prostaglandin metabolism of the eggshell gland |
| B. Mukhopadhyay, P. Roy, A. Chatterjee
and S. Bhattacharya | 129 Intracellular events in response to GnRH causing gonadotropin release from pituitary cells of a channid fish, <i>Channa punctatus</i> (Bloch) |
| M. D. Southall, J. M. Flinn, R. W. Holt and
V. Chandhoke | 137 Age dependent changes in serotonin and dopamine receptors in <i>Aplysia californica</i> |
| I. M. De Matos, O. A. Rocha, R. Leite and
L. Freire-Maia | 143 Lung oedema induced by <i>Tityus serrulatus</i> scorpion venom in the rat |

N. Hiramatsu, M. Shimizu, H. Fukada,
M. Kitamura, K. Ura, H. Fuda and A. Hara

M. A. Cheney, R. Fiorillo and R. S. Criddle

D. Marionnet, L. Taysse, C. Chambras and
P. Deschaux

G. Roesijadi, L. L. Brubacher, M. E. Unger
and R. S. Anderson

D. Schlenk, L. Wolford, M. Chelius,
J. Steevens and K. M. Chan

S. S. Adav and S. P. Govindwar

M. Block, P. Pärt and A. W. Glynn

D. Schlenk, A. El-Alfy and D. R. Buhler

R. Lopez, C. Taboada and A. S. Miguel

I. R. C. Gonçalves, N. Yamanouye,
G. B. Nuñez-Burgos, M. F. D. Furtado,
L. R. G. Britto and J. Nicolau

J. R. Fowles, A. Fairbrother and
N. I. Kerkvliet

M. N. Khan, P. K. Reddy, R. L. Renaud
and J. F. Leatherland

K. Balasandaram, K. Ramalingam and
V. R. Selvarajan

K. L. Minerds and J. A. Donald

O. C. M. Pereira, N. F. S. Carvalho and
C. P. Carlos

C. Bosco, R. Rodrigo, S. Diaz and J. Borax

I. I. Rudneva

P. Rodríguez, F. Francini and J. J.
Gagliardino

G. Roesijadi, K. M. Hansen and
M. E. Unger

D. I. Lutterschmidt, W. I. Lutterschmidt
and V. H. Hutchison

W. Masuda, S. Takenaka, S. Tsuyama,
M. Tokunaga, R. Yamaji, H. Inui,
K. Miyatake and Y. Nakano

P. Williot

L. Zhang, L. Zhou, A. Vega-González,
D. Mendoza and R. Drucker-Colín

K. Takahashi, Y. Akiba and K. Tamura

T. Guray and T. Guvenc

E. H. Jørgensen, I. C. Burkow, H. Foshaug,
B. Killie and K. Ingebrigtsen

149 Transition of serum vitellogenin cycle in Sakhalin taimen (*Hucho perryi*)

159 Herbicide and estrogen effects on the metabolic activity of *Elliptio complanata* measured by calorimetry

165 3-methylcholanthrene-induced EROD activity and cytochrome P450 in immune organs of carp (*Cyprinus carpio*)

171 Metallothionein mRNA induction and generation of reactive oxygen species in molluscan hemocytes exposed to cadmium *in vitro*

177 Effect of arsenite, arsenate, and the herbicide monosodium methyl arsonate (MSMA) on hepatic metallothionein expression and lipid peroxidation in channel catfish

185 Effects of Aflatoxin B1 on liver microsomal enzymes in different strains of chickens

191 Influence of water quality on the accumulation of methyl ²⁰³mercury in gill tissue of minnow (*Phoxinus phoxinus*)

199 Down regulation of hepatic flavin-containing monooxygenase activity by 17 β -estradiol in rainbow trout (*Onchorhynchus mykiss*)

203 Metabolic effects in rats of verapamil alone and in combination with captopril

207 Detection of calcium-binding proteins in venom and Duvernoy's glands of South American snakes and their secretions

213 Effects of induced hypo- and hyperthyroidism on immune function and plasma biochemistry in mallards (*Anas platyrhynchos*)

221 Application of HPLC methods to identify plasma profiles of 11-oxygenated androgens and other steroids in arctic charr (*Salvelinus alpinus*) during gonadal recrudescence

229 Bioelectrical activity of brain in *Rana tigrina* (Daudin) in response to phosalone poisoning

233 Lack of evidence for functional natriuretic peptide receptors in the heart of the cane toad, *Bufo marinus*

241 Perinatal estrogen exposure: later repercussion on the fertility of rats

247 Renal effects of chronic exposure to malathion in *Octodon degus*

255 Blood antioxidant system of Black Sea elasmobranch and teleosts

261 Effect of Oubain on insulin secretion in the amphibian pancreas

Vol. 118C, No. 3

267 Concentration-response relationships for Cd, Cu, and Zn and metallothionein mRNA induction in larvae of *Crassostrea virginica*

271 Melatonin and chlorpromazine: Thermal selection and metabolic rate in the bullsnake, *Pituophis melanoleucus*

279 Inositol 1,4,5-trisphosphate and cyclic ADP-ribose mobilize Ca²⁺ in a protist, *Euglena gracilis*

285 Effects of incubation media on maturation of isolated ovarian follicles of Siberian sturgeon (*Acipenser baeri* Brandt) induced by sturgeon gonadotropic preparation or 17 α ,20 β -dihydroxyprogesterone

295 Extremely low frequency magnetic fields promote neurite varicosity formation and cell excitability in cultured rat chromaffin cells

301 Effect of dietary ascorbic acid on the hepatic microsomal mixed function oxidase system in liver of chicks treated with *Escherichia coli* lipopolysaccharide

305 Sheep tissue acetyl coenzyme A-dependent arylamine N-acetyltransferases

311 Influence of lipid status on tissue distribution of the persistent organic pollutant octachlorostyrene in Arctic charr (*Salvelinus alpinus*)

L. Samanta and G. B. N. Chainy	319	Comparison of hexachlorocyclohexane-induced oxidative stress in the testis of immature and adult rats
J. M. Monserrat, A. Bianchini and M. Rebelo	329	Toxicity and anticholinesterase effect of formulated methyl parathion to the estuarine crab <i>Chasmagnathus granulata</i> (Decapoda, Grapsidae) pre-exposed to sesamol
A. V. Stefano, L. F. Canosa, J. L. D'Eramo, O. Fridman, J. M. Affanni and G. M. Somoza	335	GnRH molecular variants in the brain and pituitary gland of pejerrey, <i>Odontesthes bonariensis</i> (Atheriniformes). Immunological and chromatographic evidence for the presence of a novel molecular variant
R. B. Philp	347	Effects of pH and oxidant stressors (hydrogen peroxide and bleach) on calcium-induced aggregation of cells of the marine sponge <i>Microciona prolifera</i>
H. Mover-Lev and A. Ar	353	Changes in enzymatic antioxidant activity in pregnant rats exposed to hyperoxia or hypoxia
M. Baudrimont, S. Lemaire-Gony, F. Ribeyre, J. Métivaud and A. Boudou	361	Seasonal variations of metallothionein concentrations in the Asiatic clam (<i>Corbicula fluminea</i>)
C. S. E. Jewell, M. H. Mayeaux and G. W. Winston	369	Benzo[a]pyrene metabolism by the hepatopancreas and green gland of the red swamp crayfish, <i>Procambarus clarkii</i> , <i>in vitro</i>
D. Lamošová, M. Zeman and M. Juráni	375	Influence of melatonin on chick skeletal muscle cell growth
E. O. Wango, D. W. Onyango, H. Odongo, E. Okindo and J. Mugweru	381	<i>In vitro</i> production of testosterone and plasma levels of luteinising hormone, testosterone and cortisol in male rats treated with heptachlor
J. D. Jones and P. E. Zollman	387	Black bear (<i>Ursus americanus</i>) bile composition: Seasonal changes
K. Ohba, F. Tsukahara, Y. Uchida, A. Ogawa and T. Muraki	391	Iodothyronine deiodinases in a mammalian hibernator, the chipmunk (<i>Tamias asiaticus</i>)
S. L. Levine and J. T. Oris	397	Induction of CYP1A mRNA and catalytic activity in gizzard shad (<i>Dorosoma cepedianum</i>) after waterborne exposure to benzo[a]pyrene
B. B. Boyer, O. A. Ormseth, L. Buck, M. Nicolson, M. A. Pelleymounter and B. M. Barnes	405	Leptin prevents posthibernation weight gain but does not reduce energy expenditure in Arctic ground squirrels
	413	Keyword Index for Vol. 118C
	415	Author Index for Vol. 118C
	417	Comparative Biochemistry and Physiology C Bibliography
	III	Volume Contents for Vol. 118C

